Fig.1A

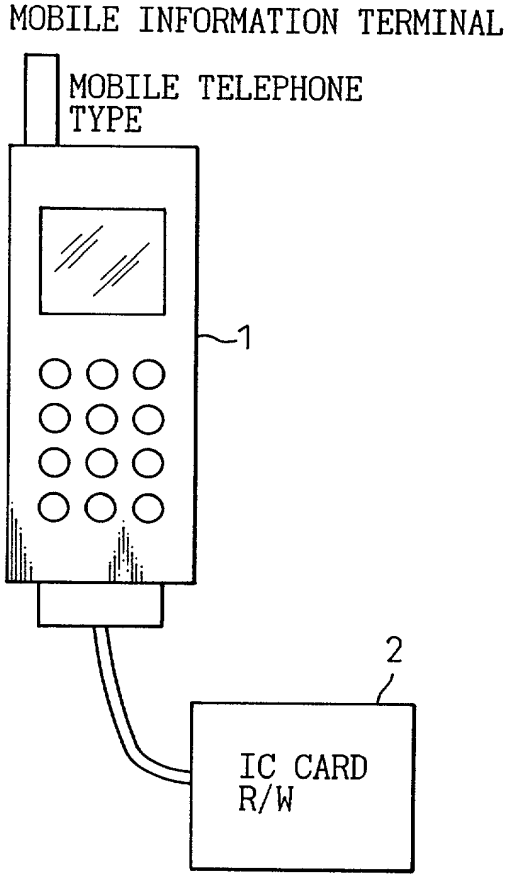

MOBILE INFORMATION TERMINAL
MOBILE TELEPHONE TYPE
1
2
IC CARD R/W

Fig.1B

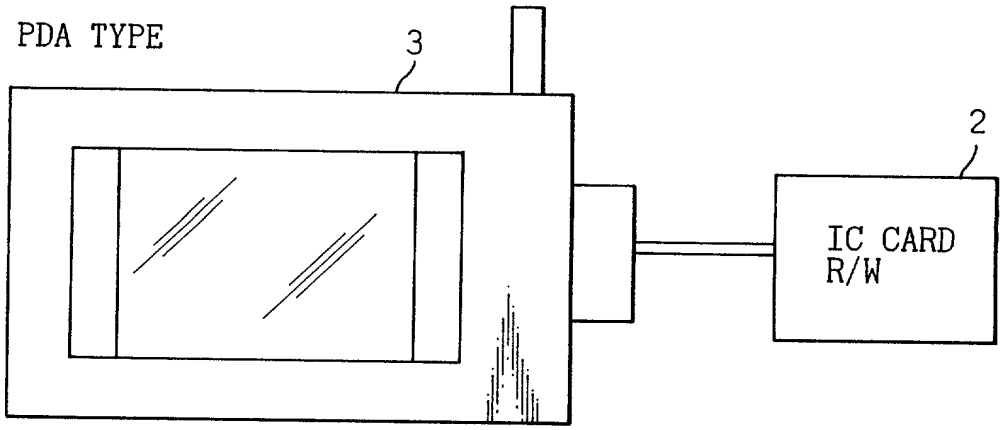

PDA TYPE
3
2
IC CARD R/W

Fig.2A CONTACT TYPE IC CARD R/W BUILT-IN

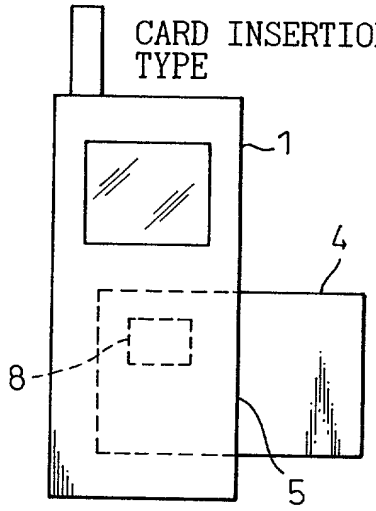


Fig.2B

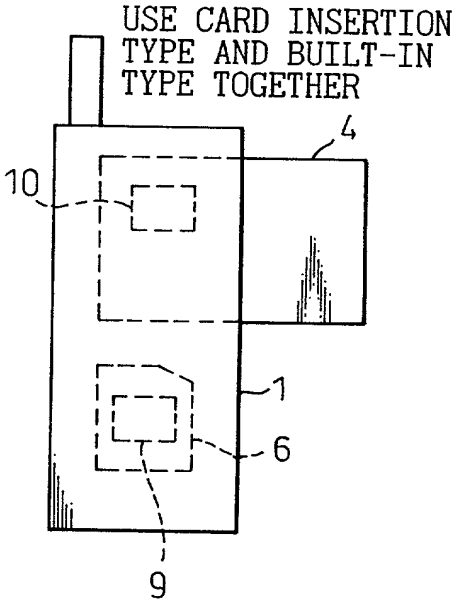
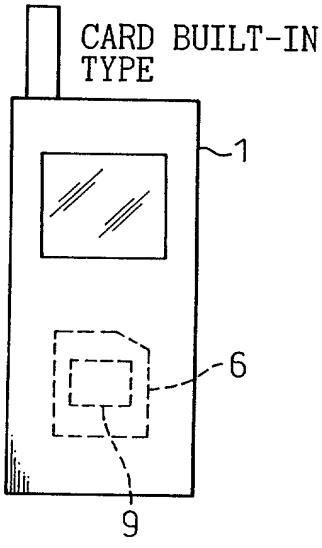
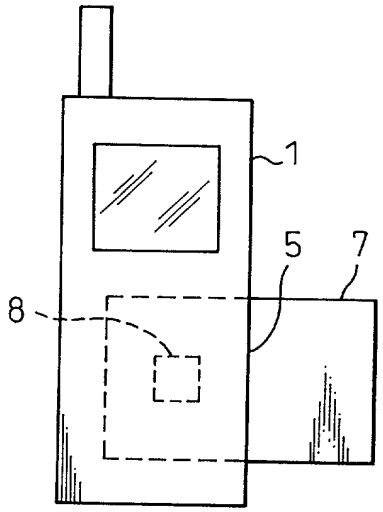


Fig.2C



NONCONTACT TYPE IC CARD R/W BUILT-IN

Fig.3A



BOTH OF CONTACT TYPE IC CARD R/W AND NONCONTACT TYPE IC CARD R/W BUILT-IN

Fig.3B

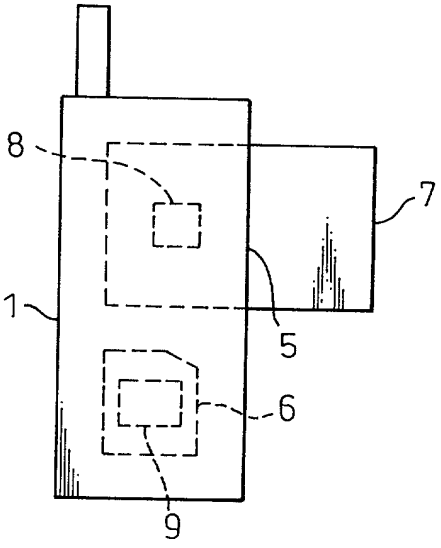


Fig. 4

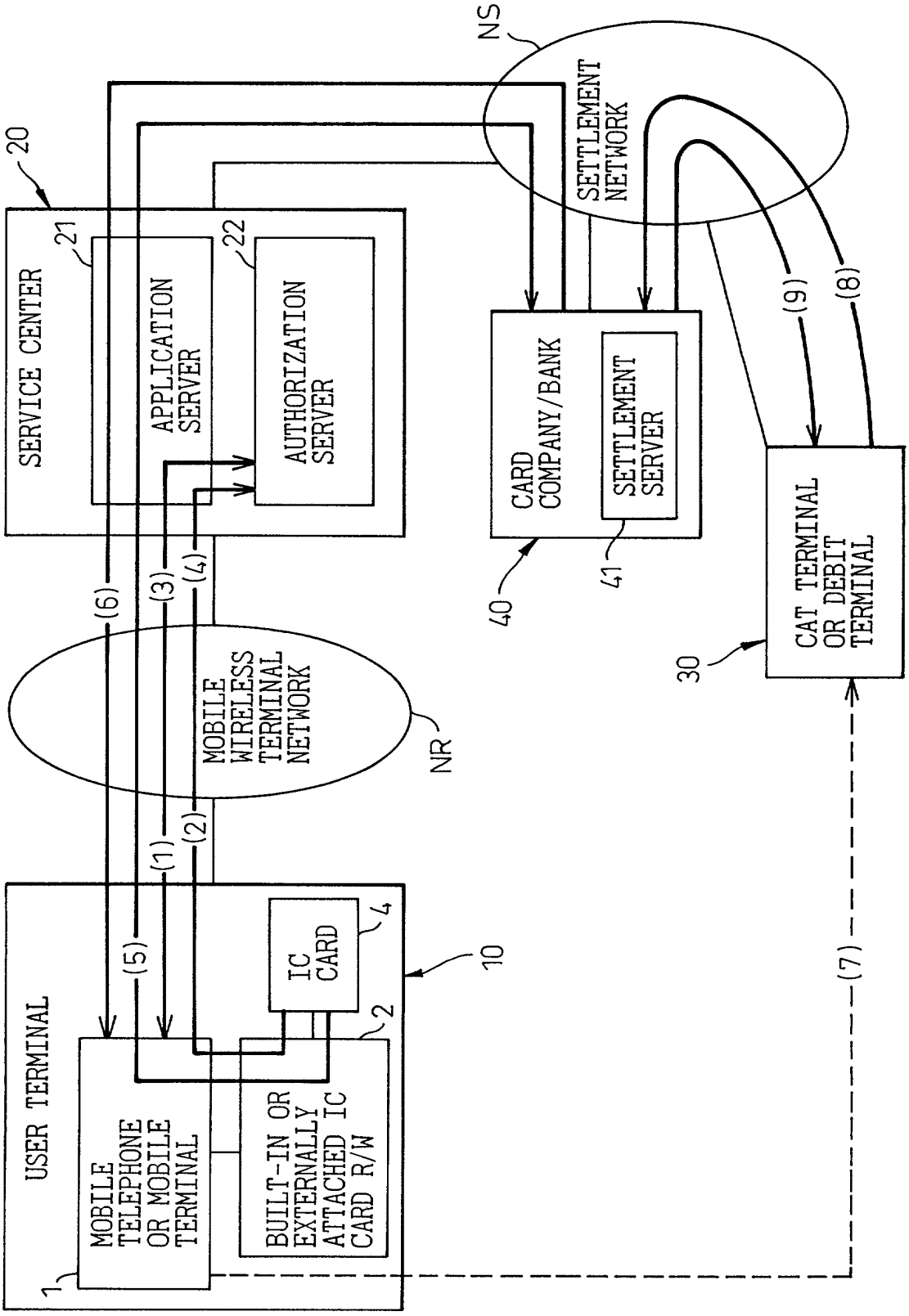

NS
SETTLEMENT NETWORK
20
SERVICE CENTER
21
APPLICATION SERVER
22
AUTHORIZATION SERVER
CARD COMPANY/BANK
SETTLEMENT SERVER
40
41
(9)
(8)
(6)
(3)
(4)
MOBILE WIRELESS TERMINAL NETWORK
NR
CAT TERMINAL OR DEBIT TERMINAL
30
(1)
(2)
(5)
IC CARD
4
10
2
USER TERMINAL
MOBILE TELEPHONE OR MOBILE TERMINAL
BUILT-IN OR EXTERNALLY ATTACHED IC CARD R/W
1
(7)

Fig.5

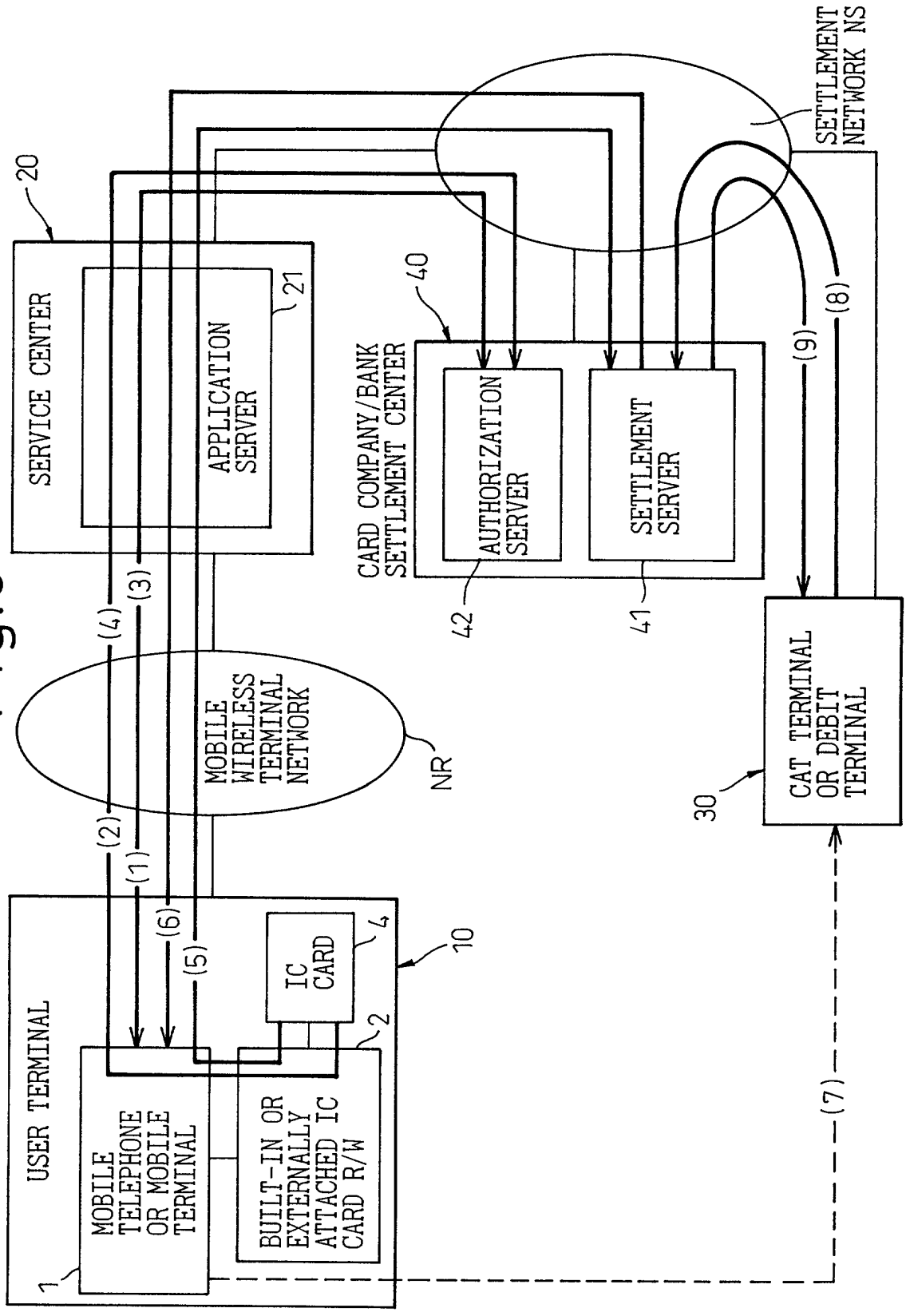

SETTLEMENT NETWORK NS
20
SERVICE CENTER
APPLICATION SERVER
21
40
CARD COMPANY/BANK SETTLEMENT CENTER
AUTHORIZATION SERVER
SETTLEMENT SERVER
42
41
(8)
(9)
(4)
(3)
MOBILE WIRELESS TERMINAL NETWORK
NR
CAT TERMINAL OR DEBIT TERMINAL
30
(2)
(1)
(6)
(5)
IC CARD
4
10
2
USER TERMINAL
MOBILE TELEPHONE OR MOBILE TERMINAL
BUILT-IN OR EXTERNALLY ATTACHED IC CARD R/W
1
(7)

Fig.6

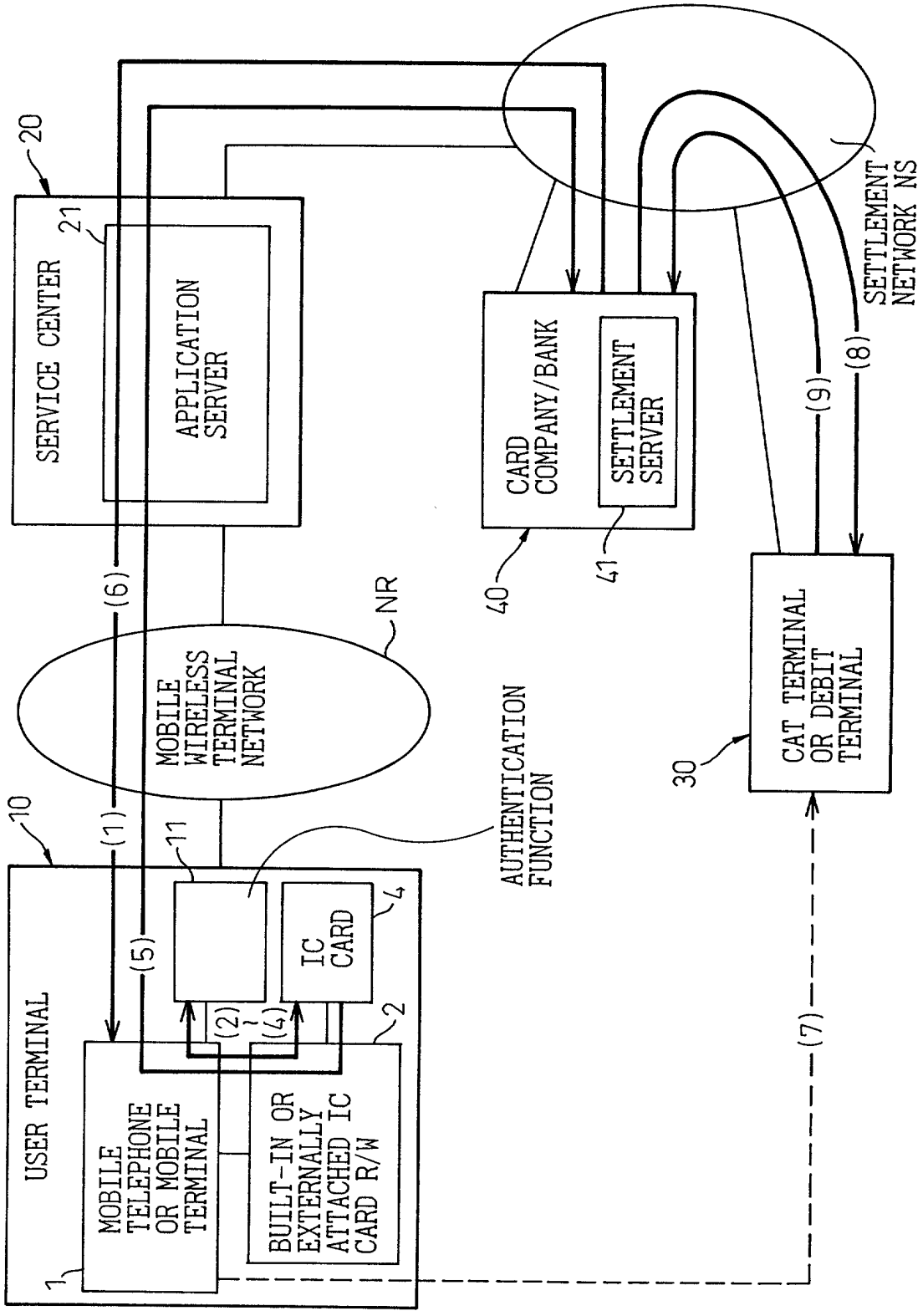

SERVICE CENTER
APPLICATION SERVER
CARD COMPANY/BANK
SETTLEMENT SERVER
SETTLEMENT NETWORK NS
MOBILE WIRELESS TERMINAL NETWORK
NR
AUTHENTICATION FUNCTION
USER TERMINAL
MOBILE TELEPHONE OR MOBILE TERMINAL
BUILT-IN OR EXTERNALLY ATTACHED IC CARD R/W
IC CARD
CAT TERMINAL OR DEBIT TERMINAL
(1)
(2)
(4)
(5)
(6)
(7)
(8)
(9)
10
11
20
21
30
40
41
1
2
4

Fig.7

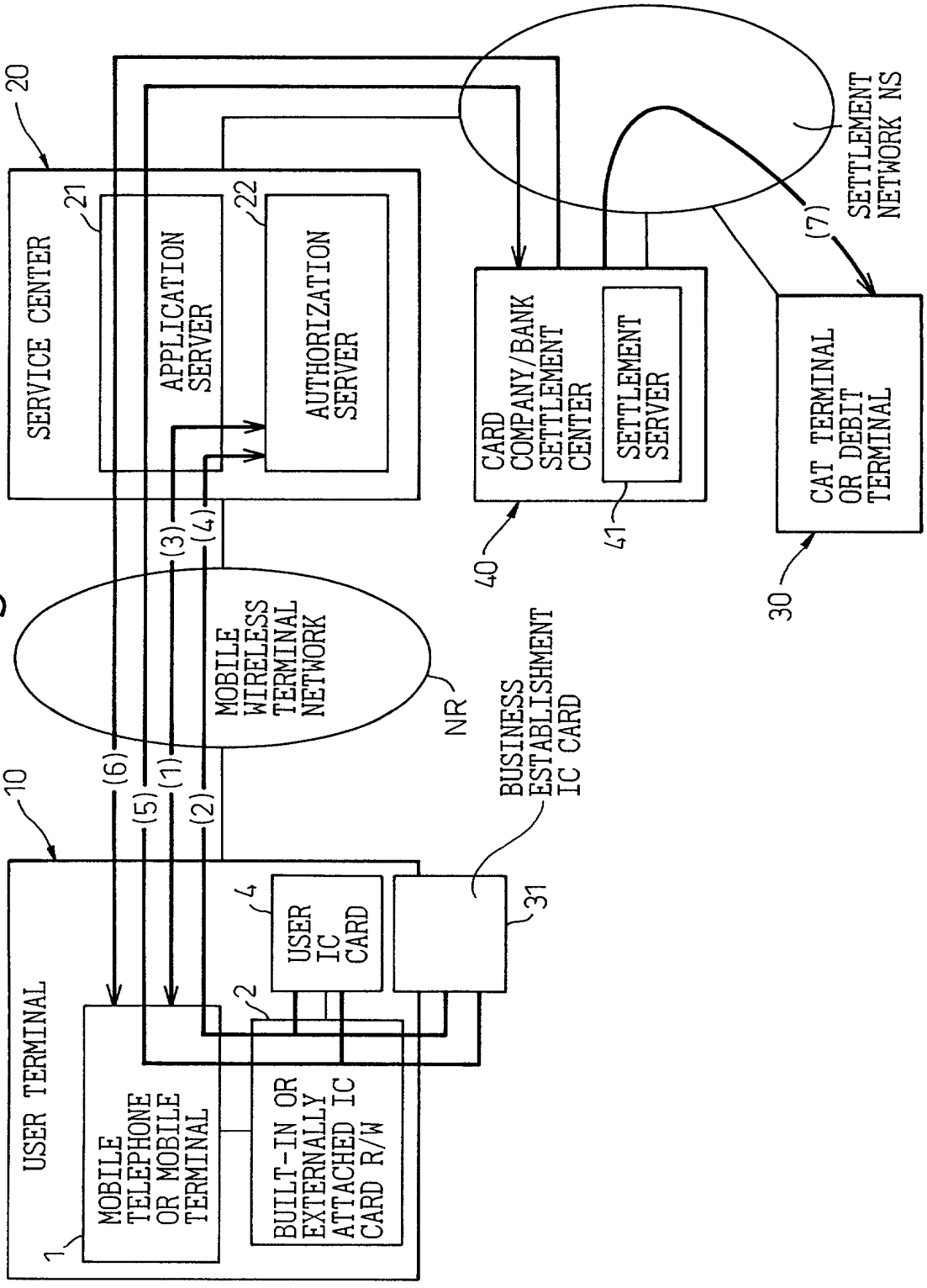

USER TERMINAL
MOBILE TELEPHONE OR MOBILE TERMINAL
BUILT-IN OR EXTERNALLY ATTACHED IC CARD R/W
USER IC CARD
BUSINESS ESTABLISHMENT IC CARD
MOBILE WIRELESS TERMINAL NETWORK
NR
SERVICE CENTER
APPLICATION SERVER
AUTHORIZATION SERVER
CARD COMPANY/BANK SETTLEMENT CENTER
SETTLEMENT SERVER
CAT TERMINAL OR DEBIT TERMINAL
SETTLEMENT NETWORK NS
(1)
(2)
(3)
(4)
(5)
(6)
(7)
1
2
4
10
20
21
22
30
31
40
41

Fig.8

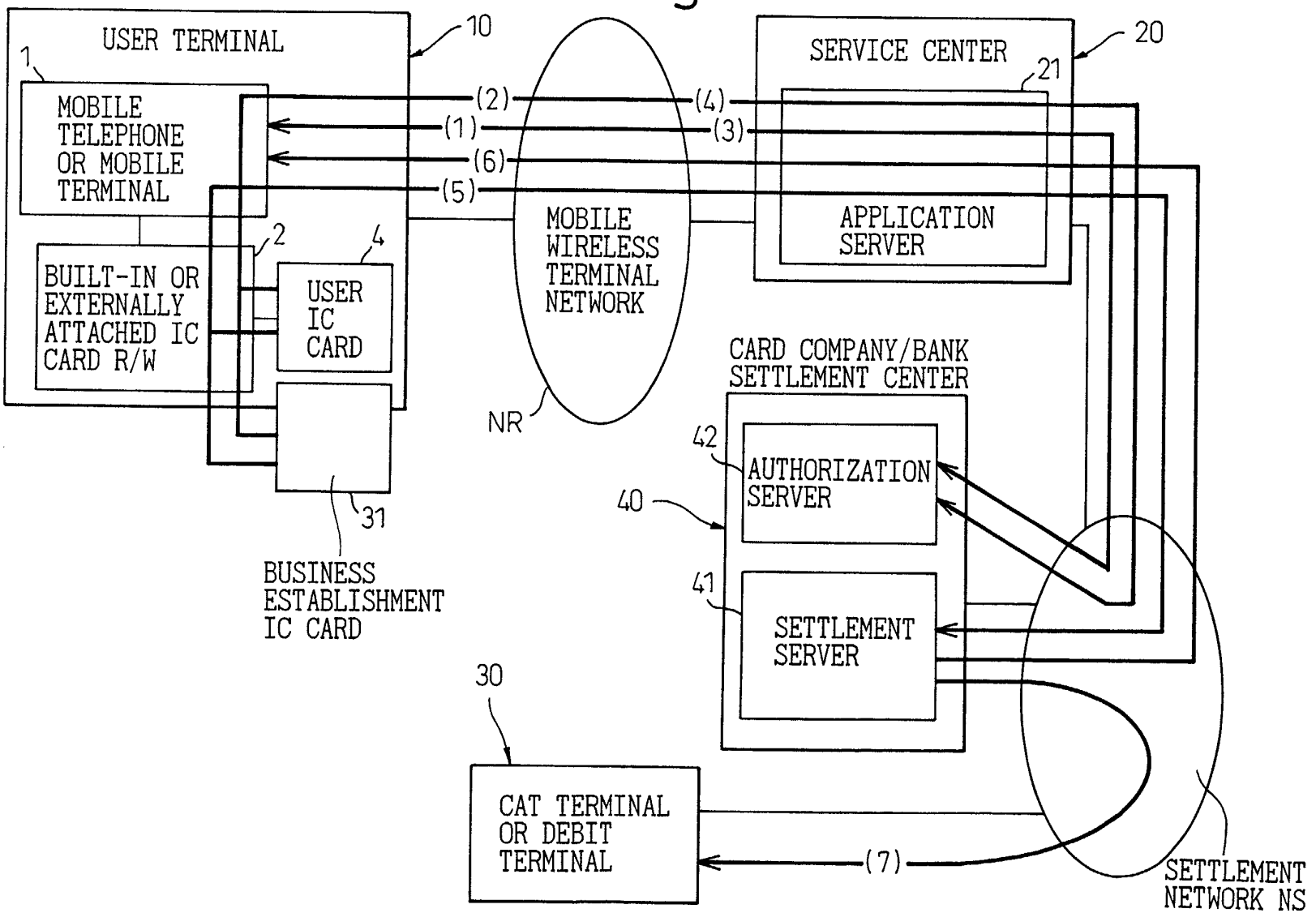

USER TERMINAL
10
1
MOBILE TELEPHONE OR MOBILE TERMINAL
BUILT-IN OR EXTERNALLY ATTACHED IC CARD R/W
2
4
USER IC CARD
31
BUSINESS ESTABLISHMENT IC CARD
(1)
(2)
(3)
(4)
(5)
(6)
MOBILE WIRELESS TERMINAL NETWORK
NR
SERVICE CENTER
20
21
APPLICATION SERVER
CARD COMPANY/BANK SETTLEMENT CENTER
42
AUTHORIZATION SERVER
40
41
SETTLEMENT SERVER
30
CAT TERMINAL OR DEBIT TERMINAL
(7)
SETTLEMENT NETWORK NS

Fig.9

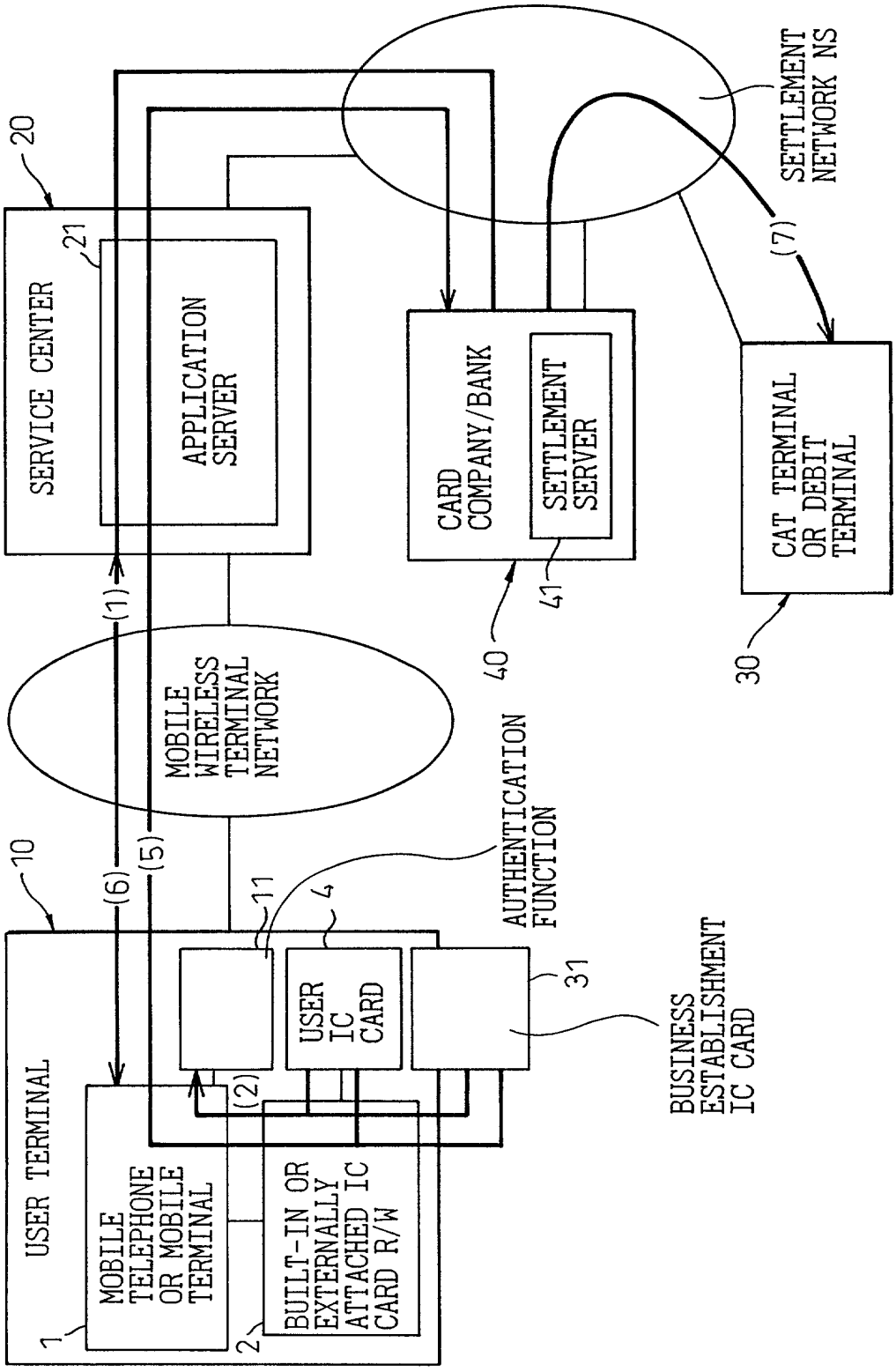

USER TERMINAL
MOBILE TELEPHONE OR MOBILE TERMINAL
BUILT-IN OR EXTERNALLY ATTACHED IC CARD R/W
USER IC CARD
BUSINESS ESTABLISHMENT IC CARD
AUTHENTICATION FUNCTION
MOBILE WIRELESS TERMINAL NETWORK
SERVICE CENTER
APPLICATION SERVER
CARD COMPANY/BANK
SETTLEMENT SERVER
CAT TERMINAL OR DEBIT TERMINAL
SETTLEMENT NETWORK NS
(1)
(2)
(5)
(6)
(7)
1
2
4
10
11
20
21
30
31
40
41

Fig.10

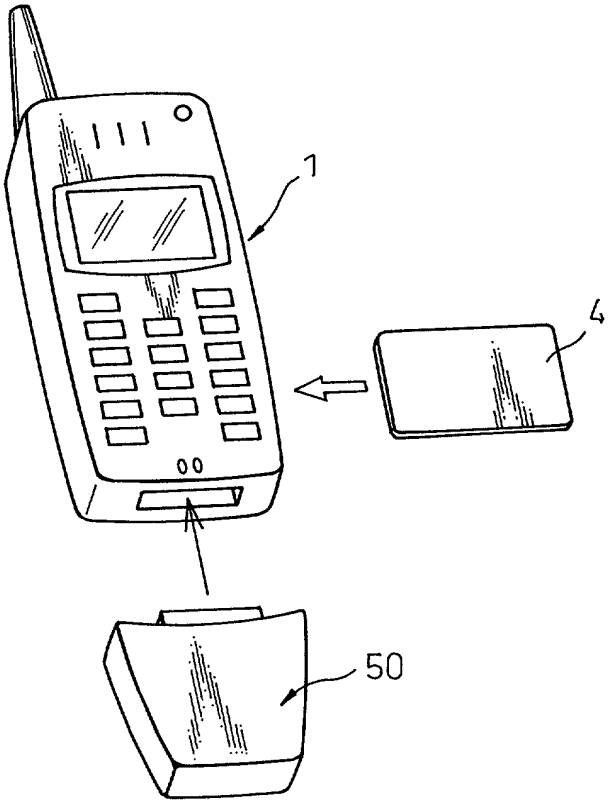


Fig.11

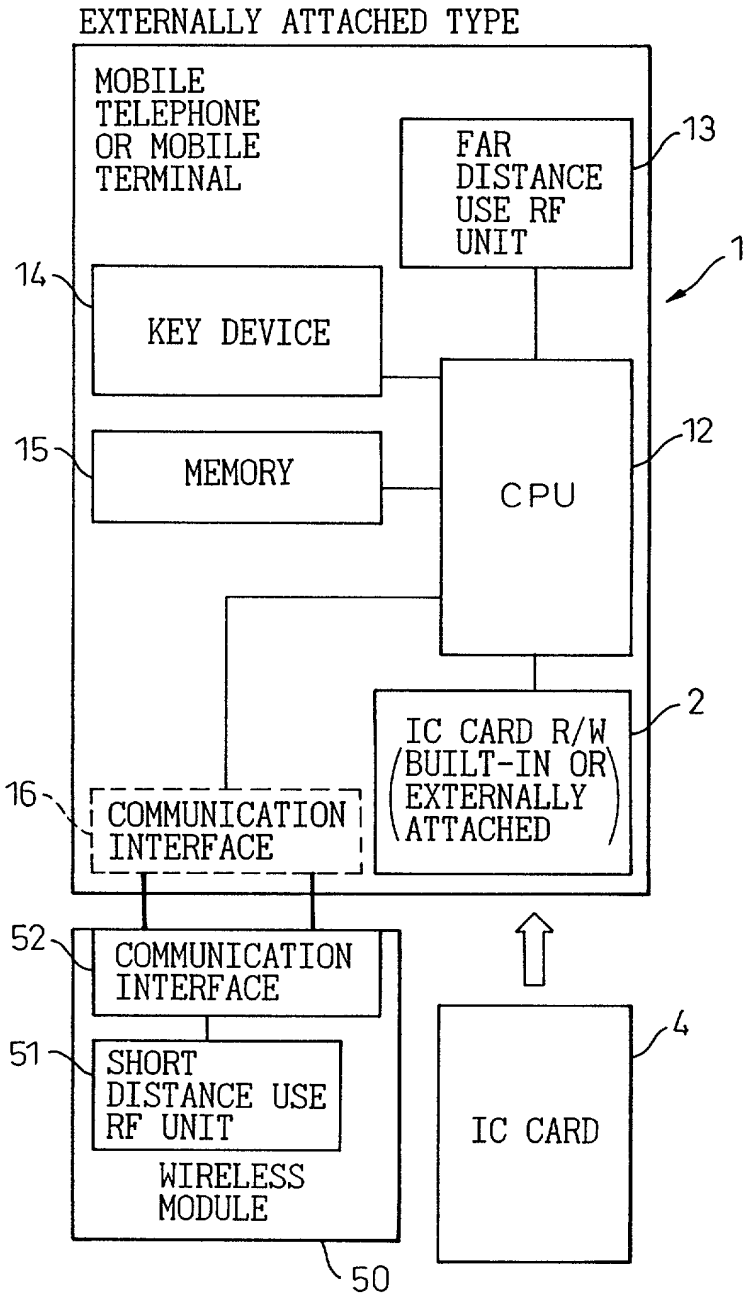

EXTERNALLY ATTACHED TYPE
MOBILE TELEPHONE OR MOBILE TERMINAL
FAR DISTANCE USE RF UNIT
13
1
14
KEY DEVICE
15
MEMORY
CPU
12
IC CARD R/W (BUILT-IN OR EXTERNALLY ATTACHED)
2
16
COMMUNICATION INTERFACE
52
COMMUNICATION INTERFACE
51
SHORT DISTANCE USE RF UNIT
WIRELESS MODULE
50
IC CARD
4

Fig.12

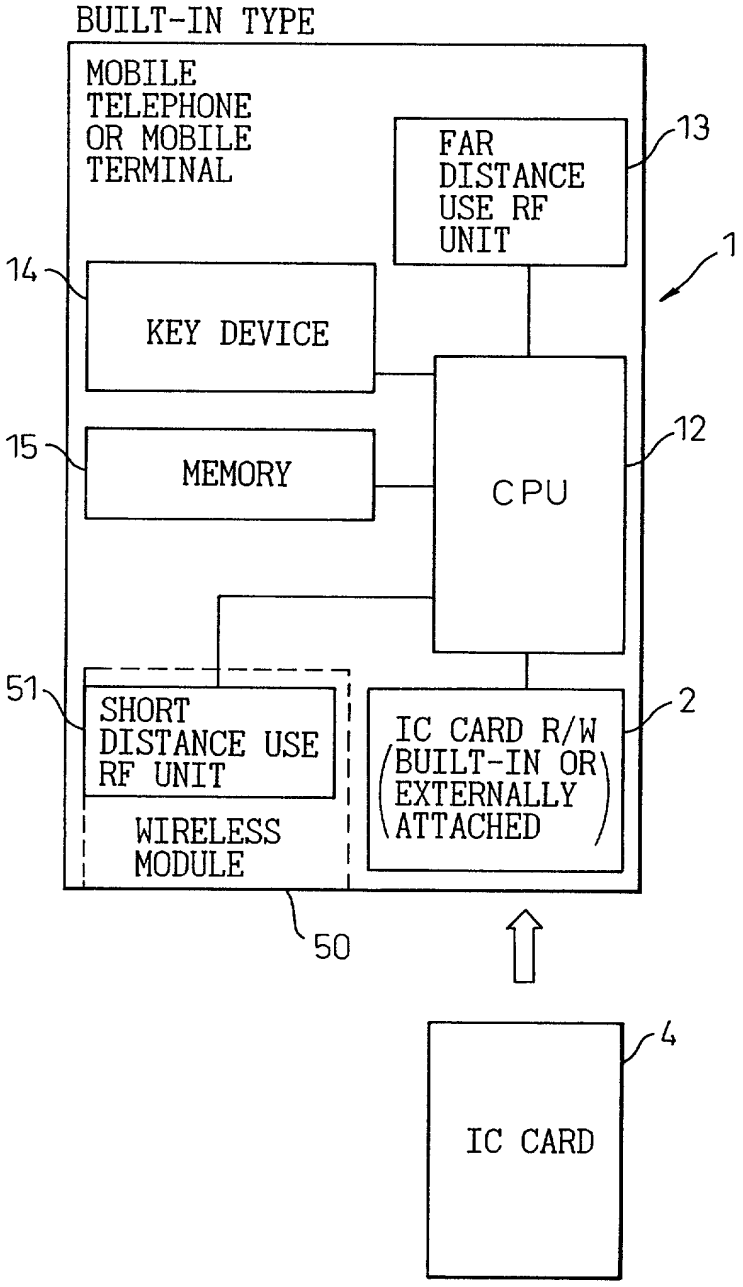

BUILT-IN TYPE
MOBILE TELEPHONE OR MOBILE TERMINAL
FAR DISTANCE USE RF UNIT
13
1
14
KEY DEVICE
15
MEMORY
CPU
12
51
SHORT DISTANCE USE RF UNIT
WIRELESS MODULE
IC CARD R/W (BUILT-IN OR EXTERNALLY ATTACHED)
2
50
4
IC CARD

Fig.13

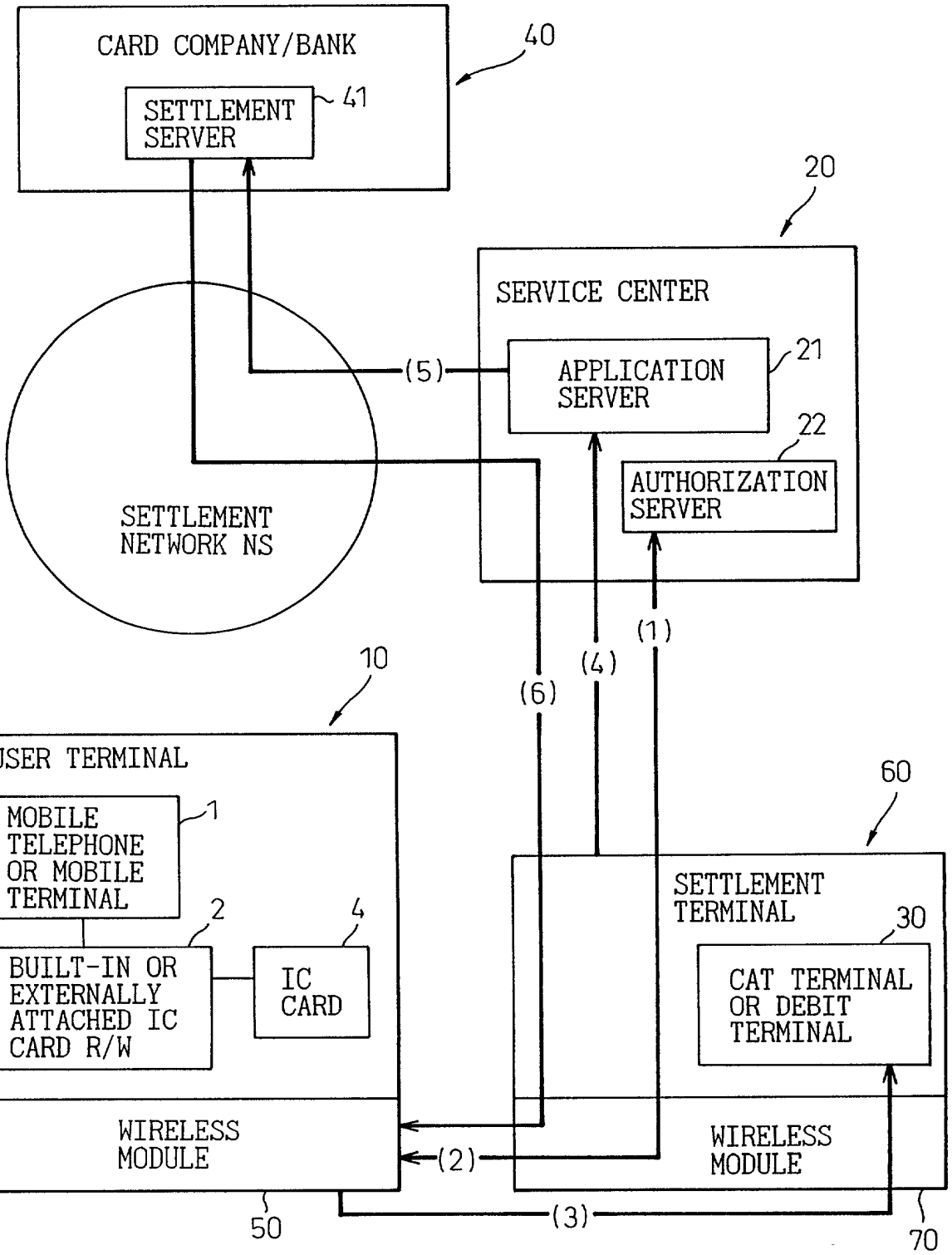

CARD COMPANY/BANK
40
SETTLEMENT SERVER
41
20
SERVICE CENTER
APPLICATION SERVER
21
22
AUTHORIZATION SERVER
(5)
SETTLEMENT NETWORK NS
(1)
(4)
(6)
10
USER TERMINAL
MOBILE TELEPHONE OR MOBILE TERMINAL
1
2
4
BUILT-IN OR EXTERNALLY ATTACHED IC CARD R/W
IC CARD
60
SETTLEMENT TERMINAL
30
CAT TERMINAL OR DEBIT TERMINAL
WIRELESS MODULE
(2)
WIRELESS MODULE
50
(3)
70

Fig.14

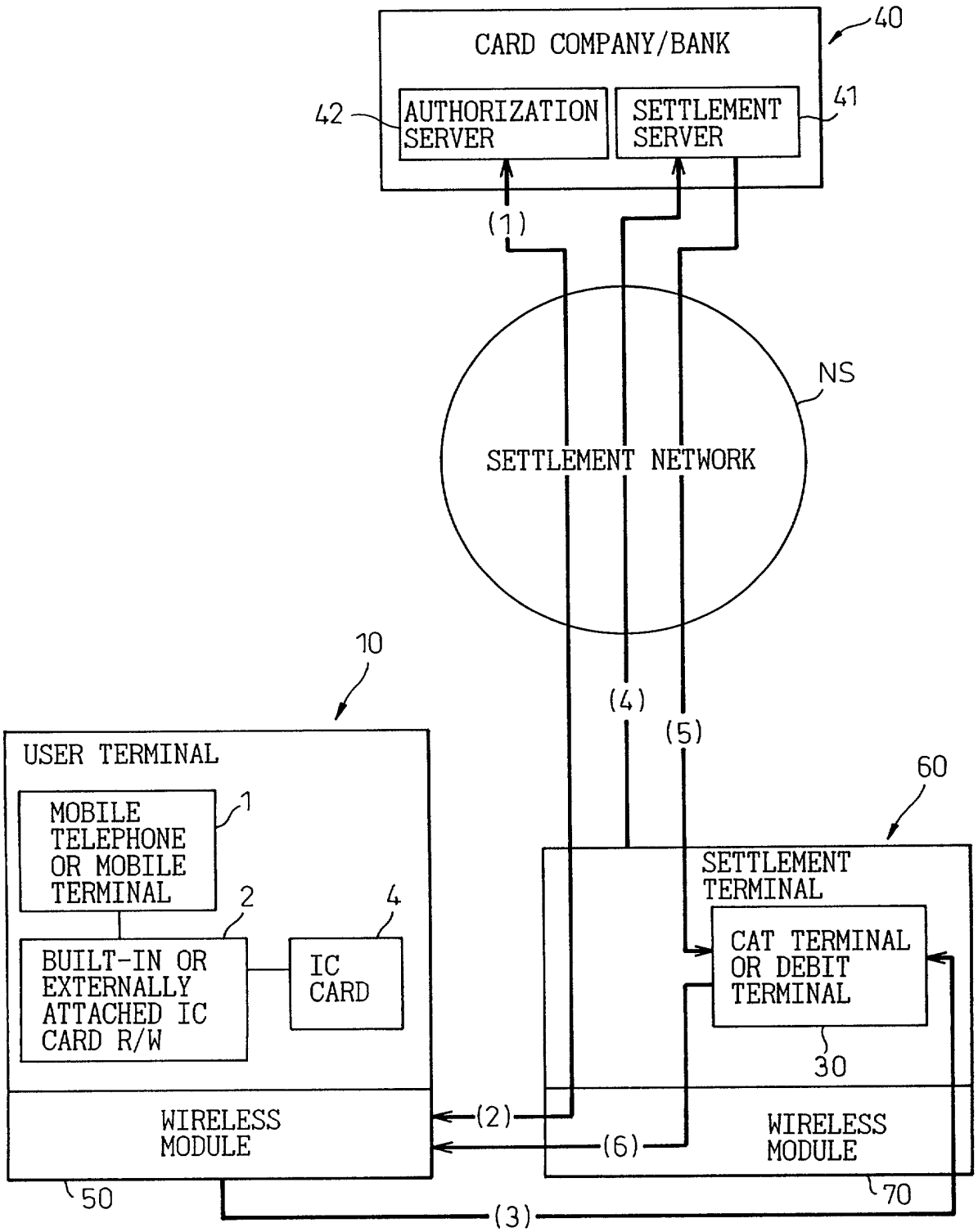
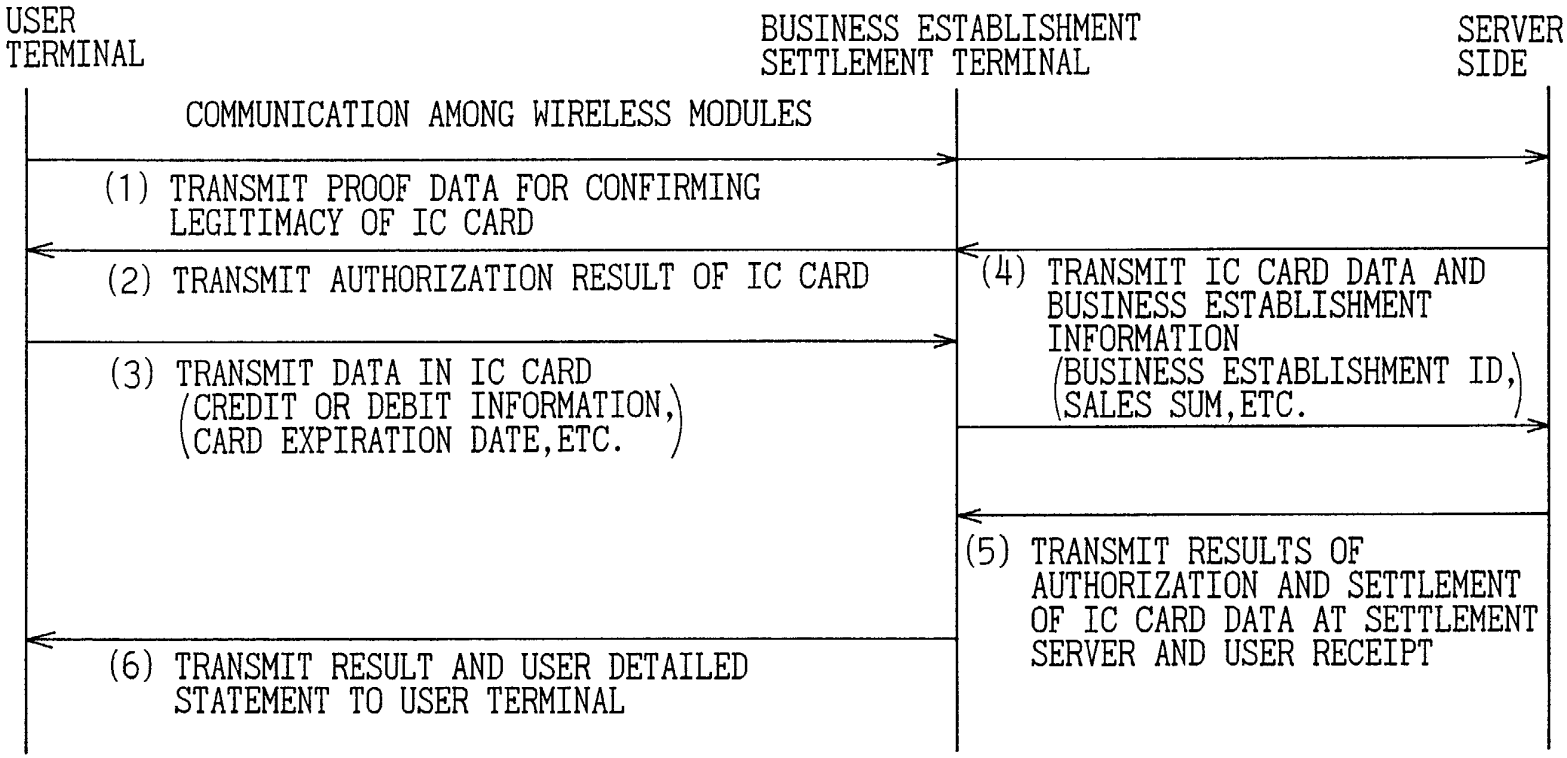

CARD COMPANY/BANK
40
AUTHORIZATION SERVER
42
SETTLEMENT SERVER
41
(1)
NS
SETTLEMENT NETWORK
10
USER TERMINAL
MOBILE TELEPHONE OR MOBILE TERMINAL
1
BUILT-IN OR EXTERNALLY ATTACHED IC CARD R/W
2
IC CARD
4
WIRELESS MODULE
50
(4)
(5)
60
SETTLEMENT TERMINAL
CAT TERMINAL OR DEBIT TERMINAL
30
(2)
(6)
WIRELESS MODULE
70
(3)

Fig.15

SETTLEMENT SEQUENCE AMONG WIRELESS MODULES



*DATA AMONG WIRELESS MODULES ARE ENCRYPTED BY USING ENCRYPTION METHOD OF USED WIRELESS PROTOCOL

PCT/JP2003/000000

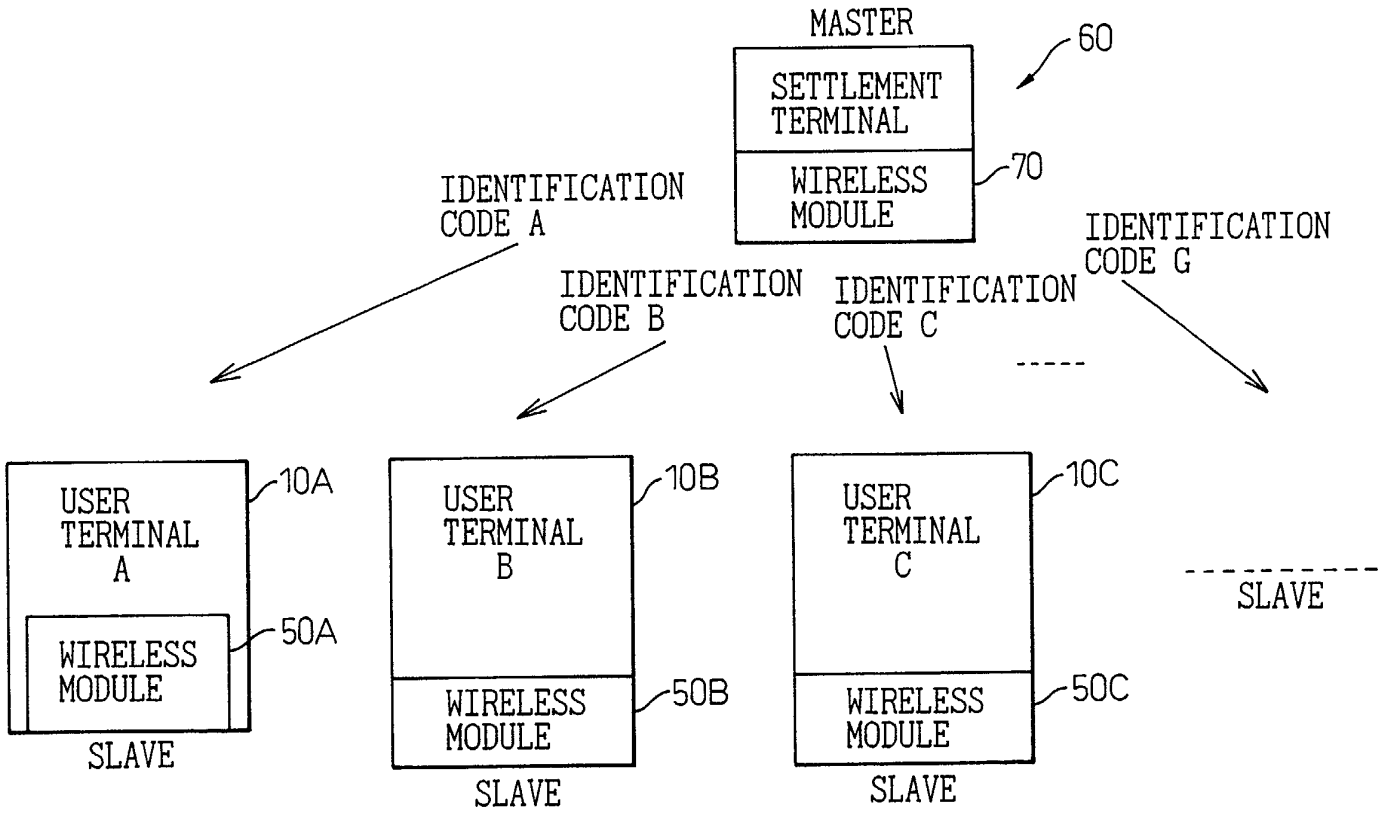



Fig.16